

Missouri Department of Natural Resources

Total Maximum Daily Load Information Sheet

Deepwater Creek

Waterbody Segment at a Glance:

County: Henry
Nearby Cities: Montrose, Clinton
Length of impairment 1: 3.5 mile
Pollutant 1: Low dissolved oxygen
Length of impairment 2: 0.1 mile
Pollutant 2: Trauma to fish
Source: Montrose Dam

Proposed for addition to 2002 303(d) list.

TMDL Priority Ranking: To be determined



Description of the Problem

Beneficial uses of Deepwater Creek:

- Livestock and Wildlife Watering
- Protection of Warm Water Aquatic Life and Human Health associated with Fish Consumption

Use that is impaired

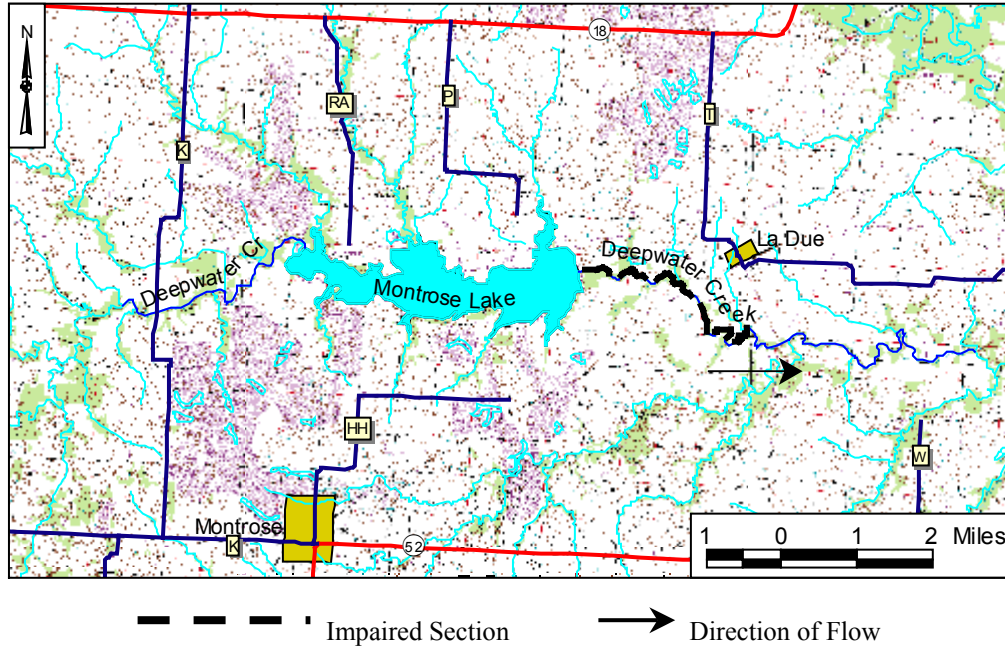
- Protection of Warm Water Aquatic Life

Standards that apply

- The impairment of Deepwater Creek is based on exceedence of the general criteria contained in Missouri's Water Quality Standards, 10 CSR 20-7.031 (3)(D) and (G). These criteria state:
 "Waters shall be free from substances or conditions in sufficient amounts to result in toxicity to human, animal or aquatic life."
 "Waters shall be free from physical, chemical or hydrologic changes that would impair the natural biological community."
- The specific criterion on dissolved oxygen (10 CSR 20-7.031 Table A) also applies. The standard for dissolved oxygen in streams is 5.0 milligrams per liter (mg/L) or parts per million.

Operation of Montrose Dam has resulted in several conditions harmful to fish. These include rapid reductions in flow from the dam that have stranded fish in pools, inadequate flow through the dam to maintain suitable aquatic habitat and discharge of water with low levels of dissolved oxygen. These problems have been responsible for 18 different fish kills since 1975. These 18 events are estimated to have killed over 20,000 fish, including many very large catfish. Two of these kills have occurred in the last three years and thus meet the state's criterion for impairment due to recurring acutely toxic events.

Map of Deepwater Creek, Henry County, Showing Impaired Segment



Fish Kills in Deepwater Creek below Montrose Dam (1975 - 1999)			
Date	No. of Fish	Species	Cause
09/05/75	5000	Sport Fish & Others	Low Dissolved Oxygen/Inadequate Flow
03/18/82	348	Sport Fish & Others	Physical Damage and Stranding
03/01/94	15	Catfish & Crappie	Physical Damage and Stranding
03/01/84	500	Shad	Physical Damage and Stranding
03/22/84	218	Sport Fish	Physical Damage and Stranding
03/22/84	204	Shad & Others	Physical Damage and Stranding
04/04/84	14	Sport Fish	Physical Damage and Stranding
04/10/84	506	Sport Fish	Physical Damage and Stranding
04/10/84	50	Carp	Physical Damage and Stranding
05/16/88	9600	2/3 Sport Fish & Others	Low Dissolved Oxygen/Inadequate Flow
06/23/89	782	Sport Fish & Others	Low Dissolved Oxygen/Inadequate Flow
07/06/90	40	Catfish & Crappie	Low Dissolved Oxygen/Inadequate Flow
06/29/94	600	Sport Fish & Others	Low Dissolved Oxygen/Inadequate Flow
05/09/96	159	2/3 Sport Fish & Others	Physical Damage and Stranding
06/25/97	50	Catfish & Crappie	Physical Damage or Low Dissolved Oxygen
07/06/97	277	Sport Fish & Others	Low Dissolved Oxygen/Inadequate Flow
05/26/98	262	Sport Fish & Others	Low Dissolved Oxygen/Inadequate Flow
07/28/99	490	2/3 Sport Fish & Others	Low Dissolved Oxygen/Inadequate Flow

Source: Missouri Department of Conservation

For more information call or write:

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Program Home Page: www.dnr.state.mo.us/wpscd/wpcp/index